

In the Specification:

Please AMEND paragraph on page 12, lines 4-19, with the following amended paragraph:

An optical element six-axis micro adjustment mechanism 29 of the present invention is installed in a body tube 25 on a structure frame ~~[[2]]~~ 24 supported on a mount 23. FIG. 5 shows an example in which total four micro adjustment mechanisms 29 are placed in the body tube 25. Of course, if the number of optical elements varies, the number of micro adjustment mechanisms should be changed according to the number of optical elements. For example, there are preferably six micro adjustment mechanisms if six optical systems exist, and there are preferably eight micro adjustment mechanisms if eight optical elements exist. Furthermore, it is not necessary to provide micro adjustment mechanisms for all optical elements, and the number of micro adjustment mechanisms may be smaller than the number of optical elements.

Please AMEND paragraph on page 12, lines 20-25, with the following amended paragraph:

A mechanism described in this embodiment is such that a ~~moving~~ moving table 1 can move in directions of six axes in a noncontact manner with respect to a fixed table 2. Here, the directions of six axes refer to X, Y and Z directions and directions of rotation about X, Y and Z axes.

Please AMEND paragraph on page 19, lines 7-16, with the following amended paragraph:

Of seven fixed members ~~[[3]]~~ 4, three fixed members 14a, 14b and 14c form Z fixed members for micro-driving the moving table 1 in the Z direction with respect to the fixed table 2. The Z fixed members 14a, 14b and 14c are arranged so that the straight line portion of the elliptical coil is perpendicular to the Z direction, and thrust forces in the Z direction can be made to act on the bipolar magnets 17 arranged along the Z direction of the Z moving members 9a, 9b and 9c.

Please AMEND paragraph on page 21, line 14 to page 22, line 24, with the following amended paragraph:

An example of configuration (first alteration example) for measuring and correcting a relative position between the optical element 32 and the wafer or reticle (not shown) is shown in FIG. 10. FIG. 10 shows an example of exposure apparatus, in which an illumination optical system guiding light from a light source to a mask (reticle), a mask stage supporting and driving the mask, and the like are not shown, but a structure supporting a projection optical system guiding light from the mask to the wafer (exposed body), and a structure supporting the projection optical system are shown. (Of course, the same holds true for ~~DIGS~~ FIGS. 11 to 14 described below). In this example, postures in directions of six axes of the moving table 1 (particularly optical element 32) are measured in a noncontact manner from measurement means 42 mounted on the fixed table 2 supporting the optical elements 32. The result of this measurement is "local" information of the optical element 32, and thus separate means for measuring and compensating the relative position and angle between the optical element 32 and the wafer or reticle placed on a different structure is required. In the example of FIG. 10, a posture between the structure frame 24 bearing the optical element and a separately provided

basic structure 41 is measured separately, the posture of the optical element 32 is controlled with the basic structure as a reference, and the posture relative to the basic structure 41 is corrected for all elements requiring relative postures such as the wafer and reticle, whereby all relative postures can be controlled. This local measurement means 42 and the measurement means 42 between the basic structure 41 and the structure frame 24 may have different principles, and noncontacting instrumentation means such as a laser interferometer or electric capacity sensor is preferably used as described above.

Please AMEND paragraph on page 28, lines 5-12, with the following amended paragraph:

FIGS. 8 and 9 are perspective views of the moving table 1 and the fixed table 2, respectively. Seven magnetic blocks ~~32~~ 132 (35a-c, 37a-b, 39a-b) are mounted on the back surface of the moving table 1. Each magnetic block ~~32~~ 132 is oppositely fixed by a pair of electromagnets 33 (36a-c, 38a-b, 40a-b) described later on with the magnetic block ~~32~~ 132 sandwiched therebetween in a noncontact manner.

Please AMEND paragraph on page 40, lines 6-11, with the following amended paragraph:

The moving part 1 is provided with moving members 3 (e.g., Fig. 1) constituting the linear motor. In FIG. 18, all the moving members are provided on the back surface of the moving part 1, but some or all of the moving members may be provided on the side face or the like of the moving part 1.

Please AMEND paragraph on page 47, line 15 to page 48, line 12, with the following amended paragraph:

The moving part 1 and the fixed part 2 each comprise a kinematic mount 62, so that the moving part 1 can be positioned with respect to the fixed part 2. However, the kinematic mount 62 has a positioning accuracy of about several hundreds nm, and therefore is not ~~insufficient~~ sufficient as means for positioning the moving part 1 for which a positioning accuracy in the order of nanometers is required. Thus, the moving part 1 is aligned with respect to the fixed part 2 using a positioning sensor 63[.] as the noncontacting instrumentation means 65 of the 25 positioning sensor 63, an electric capacity sensor, an eddy current sensor, a differential trans displacement sensor, and/or laser interferometer and the like can be considered. In this case, the electric capacity sensor is used. The accuracy of the electric capacity sensor has an accuracy of several tens nm. As shown in FIG. 17, a sensor target 64 is provided on the moving part 1 side, and the electric capacity sensor is provided on the fixed part 2 side. The positioning sensor 63 is provided so that the moving part 1 can be positioned with respect to the X, Y and Z directions of the fixed part 2. Here, three positioning sensors are used, but any other number of positioning sensors may be used as necessary.

Please AMEND paragraph on page 53, line 5 to page 54, line 2, with the following amended paragraph:

If a body to be processed (wafer, etc.) is exposed using the exposure apparatus, it is usually expected that the temperature of the optical element 32 is increased due to exposure heat as described previously. If the temperature of the optical element 32 is increased to the extent that a certain amount of deformation is exceeded, a correct relation of image formation

can be no longer obtained. Thus, in this Example 1, cooling means 71 for cooling the optical element 32 is provided. In consideration of alignment accuracy of the optical element 32, it is desirable that the cooling means 71 is provided in the fixed part 2 as shown in FIG. 19, so that the optical element 32 can be cooled in a noncontact manner. Noncontacting cooling means includes radiation cooling. Various types of means for radiation cooling are available, but in this Example 1, a radiation member (radiation plate) is cooled using a Peltier element, and the moving part 1 (particularly optical element 32) is ~~cooled~~ cooled using radiation from the radiation member. Of course, as a method for cooling the radiation member, a coolant is made to flow through the radiation member or on the surface of the radiation member to cool the radiation member, or other cooling means may be used.